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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,770	09/22/2006	Masahiro Tojo	0216-0525PUS1	9089

2292 7590 07/19/2010
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EXAMINER

COUGHLIN, MATTHEW P

ART UNIT	PAPER NUMBER
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1626

NOTIFICATION DATE	DELIVERY MODE
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07/19/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/593,770	Applicant(s) TOJO ET AL.	
	Examiner Matthew P. Coughlin	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claims 1-5 and 7 are pending in the application. Claims 1-4 and 7 are rejected. Claim 5 is objected to.

Priority

This application is a 35 U.S.C. 371 National Stage Filing of International Application No. PCT/JP05/11138, filed June 17th, 2005, which claims priority under 35 U.S.C. 119(a-d) to Japanese Application No. 2004-179800, filed June 17th, 2004.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 17th, 2010 has been entered.

Response to Amendment

On page 2 or 9 of the response filed March 17th, 2009, Applicant requested that the examiner acknowledge Applicants' claim for foreign priority. The examiner has acknowledged Applicants' claim for foreign priority above as requested. On the same page, Applicant has requested

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confirmation that no further action is necessary with respect to the drawings. The examiner believes the current drawings are acceptable and no further action is needed.

Applicant has traversed the rejection of claims 1-5 and 7 under 35 USC 103(a) as unpatentable over US 5,210,268 by Fukuoka et al. and the rejection of claims 1-5 and 7 under 35 USC 103(a) as unpatentable over US 6,262,210 by Tojo et al. in view of US 5,210,268 by Fukuoka et al. The traversal is on the grounds that the aromatic carbonate obtained by the process of the present invention exhibits high polymerization reactivity when used as a raw material for a transesterification aromatic polycarbonate. Applicant has filed a declaration (dated 03/17/2010) which provides data to support this assertion. On pages 5 of 9 through 8 of 9 the response filed March 17th, 2010 continues to explain the differences between the reactivity between the aromatic carbonate instantly produced and the aromatic carbonate produced by the prior art procedures. Applicant's traversal is found persuasive with respect to claim 5 since the declaration clearly shows that when the amount of the aromatic carbonate ether (b) is reduced to levels below 10 ppm, by weight, the polymerization rate dramatically increases. The declaration, however, fails to clearly demonstrate that the difference in polymerization is consistent upon the entire range instantly claimed. For instance, the instant claims cover procedures where the content of the aromatic carbonate ether (b) is only partially reduced whereas the instant declaration only provides for data for a few data points that possess very low amounts of aromatic carbonate ether (b). MPEP 716.06(d) states:

Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed

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range. In re Clemens, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980)

Therefore, since the instant showing of unexpected results is not commensurate with the scope instantly claimed, the rejections of claims 1-4 and 7 as unpatentable over U.S. Patent No. 5,210,268 by Fukuoka et al. and over U.S. Patent No. 6,262,210 by Tojo et al. in view of U.S. Patent No. 5,210,268 by Fukuoka et al.

Similarly, the rejection of claim 5 on the ground of nonstatutory obviousness-type double patenting over claim 1 of U.S. Patent No. 5,210,268 by Fukuoka et al. is withdrawn since Applicant has demonstrated unexpected results for the scope of the subject matter claimed in claim 5; however, the rejection of claims 1-4 on the ground of nonstatutory obviousness-type double patenting over claim 1 of U.S. Patent No. 5,210,268 by Fukuoka et al. is maintained since Applicant's instant showing of unexpected results is not commensurate in scope with the instant scope of claims 1-4.

Maintained Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,210,268 by Fukuoka et al.

Determining the scope and contents of the prior art. (See MPEP § 2141.01)

Fukuoka et al. teach a process for producing aromatic carbonates using the same starting materials and reagents as instantly claimed.

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Ascertainment of the differences between the prior art and the claims. (See MPEP § 2141.02)

The three differences between the prior art and the claims are that:

(1) the prior art does not teach the identity of the impurity instantly noted as an aromatic carbonate ether,

(2) the prior art does not teach an explicit procedure for a distillation to remove said impurity, and

(3) the prior art does not teach an explicit procedure for the production of aromatic polycarbonate of claim 7.

Finding of prima facie obviousness --- rationale and motivation (See MPEP § 2141.02)

With respect to the difference that the prior art does not teach the identity of the impurity instantly noted as an aromatic carbonate ether, the fact that Applicant has identified an impurity present does not render the process novel or unobvious. This same impurity would have been present in the process reported by Fukuoka et al. given the similar procedure used. Therefore, the presence of the impurity instantly noted as an aromatic carbonate ether is implicit in the procedure taught by Fukuoka et al.

With respect to the different that the prior art does not teach an explicit procedure for a distillation to remove said impurity, Fukuoka et al. generally teach that an aromatic carbonate produced by Applicant's method component (I) (see claim 1) may contain various impurities (See column 18, lines 49-57, reproduced below with emphasis added):

An aromatic carbonated which is the desired product produced by the method of the present invention is continuously withdrawn form as a high boiling point product in a liquid form from the lower portion of the continuous multi-stage distillation column. In this instance, the withdrawn liquid material may be either an aromatic carbonate alone and the starting material and/or reactant, and may contain a little amount of a low boiling product.

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Fukuoka et al. do not teach an explicit procedure to remove said low boiling product nor the identity of said impurity, but teach that (column 24, lines 60-68, emphasis added):

In the process of the present invention, the high boiling point reaction mixture containing the desired aromatic carbonate which is withdrawn from the lower portion of the continuous multi-stage distillation column, can be subjected to the conventional method for separation and purification, such as distillation, crystallization and the like, to thereby isolate the desired aromatic carbonate.

Therefore, Fukuoka et al. teach that the aromatic carbonate can be further purified by distillation.

With respect to the difference that the prior art does not teach a preparation for the aromatic polycarbonate instantly claimed, Fukuoka et al. teach that "an aromatic carbonate is useful as a raw material for the production of an aromatic polycarbonate." See column 1, background art. Therefore, a person having ordinary skill in the art at the time the invention was made would have been motivated to synthesize an aromatic polycarbonate via the procedure taught by Fukuoka et al. since the procedure avoids the use of the classic reagent phosgene, which is toxic.

Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,262,210 by Tojo et al. in view of U.S. Patent No. 5,210,268 by Fukuoka et al.

Determining the scope and contents of the prior art. (See MPEP § 2141.01)

Tojo et al. teach a process for producing aromatic carbonates using the same starting materials and reagents as instantly claimed and a process for the production of aromatic polycarbonates.

Ascertainment of the differences between the prior art and the claims. (See MPEP § 2141.02)

The two differences between the prior art and the claims are that:

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(1) the prior art does not teach the identity of the impurity instantly noted as an aromatic carbonate ether, and

(2) the prior teaches a final step for obtaining a high purity aromatic carbonate involving oxidizing by-products instead of distilling the aromatic carbonate as instantly claimed.

Finding of prima facie obviousness --- rationale and motivation (See MPEP § 2141.02)

With respect to the difference that the prior art does not teach the identity of the impurity instantly noted as an aromatic carbonate ether, the fact that Applicant has identified an impurity present does not render the process novel or unobvious. This same impurity would have been present in the process reported by Fukuoka et al. given the similar procedure used. Therefore, the presence of the impurity instantly noted as an aromatic carbonate ether is implicit in the procedure taught by Fukuoka et al.

With respect to the difference that the prior teaches a final step for obtaining a high purity aromatic carbonate involving oxidizing by-products instead of distilling the aromatic carbonate as instantly claimed, Fukuoka et al. teach (column 24) that the high boiling point reaction mixture may contain by-products and that these by-products could be removed by subjecting the mixture to the "conventional method for separation and purification, such as distillation, crystallization and the like, to thereby isolate the desired aromatic carbonate." Therefore a person having ordinary skill in the art at the time the invention was made would have recognized the final purification method instantly claimed as an obvious variant over the method taught by Tojo et al. A person having ordinary skill in the art at the time the invention was made would have reasonably expected that in order to obtain the high purity aromatic carbonates taught by Tojo et al., a distillation could be used as the final purification step. Furthermore, despite the fact that Tojo

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et al. may have removed a different impurity that the aromatic carbonate ether instantly noted, the instant method is still prima facie obvious in view of the combined references since Fukuoka et al. teach that the aromatic carbonate may contain impurities and that these impurities can be removed by distillation and Tojo et al. teach the result to be expected upon removal of impurities: that aromatic carbonates with high levels of purity and better reactivity can be obtained (See column 1, lines 54-56 and column 6, lines 53-56).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,210,268. Although the conflicting claims are not identical, they are not patentably distinct from each other. See rationale for 103 rejection cited supra in the instant office action.

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Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew P. Coughlin whose telephone number is (571)270-1311. The examiner can normally be reached on Monday through Thursday from 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew P. Coughlin/ /Rebecca L Anderson/
Examiner, Art Unit 1626 Primary Examiner, Art Unit 1626